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ABSTRACT

An experiment was devised to apply role theory to the prediction of communication behavior by observing dominance behavior as a function of gender and attitudes toward sex role stereotypes. Task type was used as an exploratory variable. The hypothesized interaction of gender and sex role attitudes did not occur, and the hypothesis that men would be more dominant than women was also rejected. Women with varying sex role attitudes, however, did exhibit dominance behavior in accordance with role theory predictions. Task type had no impact on the subjects' display of dominance or submission. (Author)

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DOMINANCE AND SUBMISSION IN INTERPERSONAL COMMUNICATION AS A FUNCTION OF SEX ROLE ATTITUDES, GENDER, AND TASK TYPE

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Abstract

An experiment was devised to apply role theory to the prediction of communication behavior by observing dominance behavior as a function of gender and attitudes toward sex role stereotypes. Task type was used as an exploratory variable. The hypothesized interaction of gender and sex role attitudes did not occur, and the hypothesis that men would be more dominant than women was also rejected. Women with varying sex role attitudes, however, did exhibit dominance behavior in accordance with role theory predictions. Task type had no impact on the subjects' display of dominance or submission.

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Introduction

The influence of social forces on communication has long been a concern of communication scholars, and attitudes toward sex roles are among the most salient of these social forces. The motivation for this study stems from interest in the communication impact of changing social attitudes toward gender-based sex role stereotypes. Perhaps the most predominant of the traditional sex role stereotypes is that men are more dominating and controlling than women.

Recently, behavioral expectations for men and women have become more flexible, and at least some members of both sexes have chosen to behave in a manner different from stereotyped role expectations. In particular, some women are exhibiting more dominant behavior while some of their male counterparts exhibit less dominant behavior. This change, if not attributable in part, at least parallels the rise of feminism and the women's movement. Consequently, this study sought to answer the following question: Is there a relationship between the changing attitudes toward sex role stereotypes and the dominance and submission aspects of male and female communication behavior?

Constant reminders of the dimensions of male and female roles begin with the receipt of dollhouses or doctor's kits as childhood presents and continue with the images presented to adults by the mass media. Maccoby and Jacklin (1974) cite research indicating that four to six-year old children have "a fairly clear, stable concept of their own sexual identity and the fact that this implies certain adult functions that are not arbitrary or subject to change" (p. 279). Current television commercials restate male and female roles when they present professional male athletes advising the audience that "a man wants to feel like a man," while a beautiful woman seductively suggests to viewers that "all it takes is a little caress." In short, one's gender has been and continues to be a major facet in the determination of social roles. Sex role stereotypes are suggested early in childhood, and prescribed behavior is reinforced throughout our lives.

Role theory forms the basis for this investigation of differences in behavior between and within the sexes, and one aspect of communication behavior which is readily observable is the display of dominance and submission by interactants. The dominance/submission dichotomy is not only a salient factor in male/female sterotype development, but also an important dimension of communication characteristics in several approaches to interpersonal behavior, including those advanced by Giffin and Patton (1976); Leary (1955), Lorr and McNair (1963), Norton (1978), and Schutz (1958). Role theory states that behavior is prescribed in accordance with certain characteristics by which individuals may be classified, including their biological sex and their psychological sex (their agreement or disagreement with sex role stereotypes). The research literature implicitly supports the use of role theory as a conceptual basis for this study by consistently suggesting a significant impact for the effects of biological sex and psychological sex on the dominance/submission aspect of interactive behavior.

Studies of non-verbal communication behavior provide strong support for the relationship between gender and dominance/submission behavior. Henley's research (1973) confirms the existence of nonverbal expressions of dominance by males and submission in females in touching behavior. Exline (1963) found that women tend to look more at the other interactant in a conversation than do men and that this increased gazing time was a manifestation of a need for affiliation, another aspect of the submissive female stereotype. Markel, Prebor and Brandt (1972) found that men speak louder than women, providing further evidence of male dominance. Finally, Benoist and Butcher (1977) observed that judges viewing tapes of male and female interactants discriminated between genders on 91 of 170 adjectives. Especially relevant to this study were ratings of males as more non-verbally "dominant" and "forceful" than females and ratings of females as more non-verbally "submissive" than males. Observations of gender differences

in non-verbal communication were paralleled by a study of conversational language (Lakoff, 1973) which found female language to be more "polite" than that of males, another indication of submissiveness in female communication behavior.

Recent research by Eman and Morse (1977); Patton, Jasnoski, and Skerchock (1977); and Greenblatt, Hasenauer, and Freimuth (1977) indicates that behaviorally associated gender traits are likely to be influenced by one's psychological sexual identification, as suggested by role theory. With regard to communication behavior that may be characterized as dominant or submissive, these studies suggest that males adhering to traditional sex role attitudes will be more dominant than non-traditional males, whereas traditional females will be more submissive than non-traditional females. Benoist and Butcher (1977) found that high-feminine (traditional) females were rated as non-verbally submissive while low-feminine (non-traditional) females were seen as non-verbally dominant, supporting the role theory assumptions for females.

Two observations appear to be warranted by the review of research:

1) Dominance, and its reciprocal, submission, is an important facet of interpersonal communication behavior, and the evidence indicates that men tend to be more dominant and women tend to be more submissive. The findings were confirmed in studies of several aspects of non-verbal communication behavior as well as a study of linguistic behavior.

2) The psychological sexual identification of males and females influences several aspects of sex-typed communication behavior. Specifically relevant to this study are implications that traditional males will be more dominant than non-traditional males while traditional females will be more submissive than non-traditional females.

On this basis, then, the following hypotheses were advanced:

H_1: Dominance and submission behavior varies as a function of conformity to sex role type and gender:

A. Traditional males will express more dominance than non-traditional males.

B. Traditional females will express more submissive behavior than non-traditional females.

H_2: Dominance and submission behavior varies as a function of the gender of the interactants:

A. Males will express more dominant behavior.

B. Females will express more submissive behavior.

Previous research, for example, the studies cited in Maccoby's (1966) review, also suggests that differences in communication behavior between men and women may vary with task type, although the research is inconclusive. Thus, although task type was restricted to the use as an independent variable of exploratory interest, a null hypothesis was used to test its impact. The third hypothesis stated that:

H_3: There will be no significant difference between the communication behavior of males and females, either traditional or non-traditional, on tasks which are stereotyped as being "male" or "female."

Method

Measures

Two measures were required to gather data for testing the research hypotheses. One instrument measured sex role attitudes, and the other provided data on dominance behavior. The first step involved the identification and selection of subjects with traditional and non-traditional attitudes toward sex role stereotypes, and the Attitudes toward Women Scale (Spence, Helmreich, and Stapp, 1973) was determined the most suitable for this study.

Any difference in attitudes toward male and female behavior, as manifest in subjects' responses to the twenty-five Attitude toward Women Scale (AWS) items, is indicative of agreement or disagreement with traditional sex role

stereotypes. Items on the AWS are scored on a zero-three scale, with zero being the most traditional score, and three the most non-traditional score.

To minimize the effects of testing error on subject selection, a 68% confidence interval was constructed about the mean for AWS scores. The endpoints of this range were used to determine the mean split of traditional and non-traditional scores. The sample mean for the subject pool was 50.84, with n = 228 and SD = 12.07. The standard error of measurement was computed using a split-half reliability coefficient computed in a pilot study (r = .87, n = 76) and found to be 4.35; thus, the 68% confidence interval about the mean included the range between 46.49 and 55.19. Scores equal to or above 55 were considered non-traditional, while those equal to or below 46 were considered traditional.

Since the research question asks whether differences in sex role attitudes are related to dominance behavior, a measure of dominance was also needed. The dominance dimension of subjects' interpersonal communication was measured by five items from the Communicator Style Measure (CSM) developed by Norton (1978). The original CSM instrument includes 25 items which were analyzed using multivariate techniques and segmented into five factors--dominant, dramatic, relaxed, attentive, and open. The items which measure dominance include:

3. In most social situations I generally speak very frequently.
5. In most social situations I tend to come on strong.
6. I have a tendency to dominate informal conversations with other people.
11. I try to take charge of things when I am with people.
23. I am dominant in social situations.

All 25 CSM items were administered, although only the five dominance items were used to generate experimental data. The other items, which measure the four other factors, served as distractors that might help to conceal the true focus of the experiment. All items were reworded for use by the other interactants in each dyad.

Internal reliability for the dominance items was found to be .82 in previous studies using the CSM (Norton, 1978, p. 106). The dominance items on the CSM are identical with the dominance items on the Predisposition toward Verbal Behavior (PVB) instrument, which has a reliability coefficient of .89 (Mortensen, Arntson, and Lustig, 1977, p. 150). Both the PVB and CSM scales were developed and tested on college campuses similar to the one where this study was conducted, and so the dominance items were considered reliable and not pre-tested before use in this study.

Subjects

The subjects participating in this study were selected from a group of 240 students enrolled in an introductory course in interpersonal communication. Only those subjects who responded to all AWS items and supplied biographical data (n = 228) were considered in the screening procedure. From this group, 64 subjects, 32 males and 32 females, were chosen on the basis of their scores on the AWS instrument. Half of the males and half of the females were identified as being traditional, and half of the males and half of the females were considered non-traditional in their attitudes toward sex role stereotypes.

Variables

Independent Variables

The primary independent variable of interest in this study was the subjects' attitudes toward sex roles. The two levels of this variable were labeled "traditional" and "non-traditional." The attitudes toward sex roles were considered a fixed factor in that the mean split used to define the two levels did not eliminate any group of subjects and thus was expected to generalize to a wide range of views held by the population from which the sample was drawn.

The second independent variable was the subjects' gender, or physiological sex. Gender was also considered a fixed factor, in that all of the population is included by the two levels.

The third independent variable was task type. The tasks used to generate communicative acts and experimental data were selected in accordance with McMahan's (1976) listing of sex-typed tasks. Two mathematically oriented tasks (Fixx, 1972) were chosen for Task 1, while an open-ended, values-oriented problem (Jurma, 1974) was selected for Task 2. Task type is also assumed to generalize to a wide variety of tasks which might be performed in non-experimental settings and was also considered a fixed factor.

Dependent Variable

The dominance aspect of communication behavior, the dependent variable, was viewed as a transactional variable rather than as a trait variable. Essentially, from the transactional perspective, an interactant is not seen as having dominance, but rather expressing dominance or submissiveness in an interaction. The transactional approach to the observation of dominance was operationalized in this study through the use of the Communicator Style Measure.

Procedures

The AWS was administered to students enrolled in interpersonal communication course sections during regularly scheduled classes. The task of securing attitudinal measures was undertaken by the students' regular instructors, two males and three females. Sixteen male and 16 female subjects were selected from the non-traditional half of the sample (above mean), and 16 males and 16 females were selected from the traditional half of the sample (below mean). The selected subjects were then paired into 32 dyads consisting of randomized groupings with traditional/non-traditional orientations. Eight dyads were formed with each of four male/female combinations: a traditional male with traditional

female; a traditional male with non-traditional female; a non-traditional male with traditional female; and a non-traditional male with non-traditional female.

Half of each of these dyadic groupings, or four dyads, were assigned Task 1, and half were assigned Task 2. The subjects were allotted twelve minutes to complete the task and were told they could continue to converse as they wished if the task were finished before the designated time. At the end of the specified period, they rated their partner's communicator style on the CSM and completed a self-rating of their own communicator style. The subjects' interactions were recorded on video-tape with their knowledge and later shown to observers. The videotaped interactions were randomly assigned to two pairs of raters. One pair of observers viewed 17 of the videotape segments, while the other pair viewed the remaining 15 segments. Three independent analyses were then conducted for the data set; analyses of self ratings, ratings by other interactants, and ratings by observers.

Research Design

The research design employed in this study, a three-factorial, completely randomized type, is illustrated in Figure 1. The cells are numbered for subsequent reference. This design met the requirements for Kirk's (1968, p. 217) type CRF-222 in that the subject assignment to cells is completely randomized, and all independent variables are fixed factors.

Analysis of Data

Tests of Research Hypotheses

The three hypotheses were assessed and then retained or rejected on the basis of the results of planned comparison tests. Planned comparisons using the *F*-ratio for main effects and *t*-tests for combined-cell comparisons are appropriate because all of the comparisons are orthogonal. The data were

FIGURE 1

DESIGN MODEL AND CELL ORDERING SCHEMA

	SEX ROLE ATTITUDES	TASK 1	TASK 2
GENDER: Male	Traditional	Cell 1	Cell 2
GENDER: Male	Non-tradition.	Cell 3	Cell 4
GENDER: Female	Traditional	Cell 5	Cell 6
GENDER: Female	Non-tradition.	Cell 7	Cell 8

analyzed by Indiana University's CDC6600 computer system, using the BMD8V and BMD5V programming packages (Dixon, 1968) and the SPSS programming package (Nie, Hull, Jenkins, Steinbrenner, and Bent, 1975).

The first hypothesis predicts a disordinal interaction between gender and sex role attitudes, as graphically displayed in Figure 2. No significant interaction effects, however, were found in any of the analyses (i.e., ratings by observers, other interactants, or self) to support the overall H_1. A significant main effect for sex role attitudes, F (df = 1, 56) = 8.20, $p < .01$, was observed in the observers' ratings of dominance (See Table 1), although such an effect was not predicted by H_1. This highly significant F-ratio was subsequently analyzed through the use of t-tests in order to assess the two subcomponents of the first hypothesis.

Part One of Hypothesis One, which suggested that traditional males would be more dominant than non-traditional males was assessed by a t-test to determine whether the mean of Cells 1 and 2 was greater than the mean of Cells 3 and 4 (see Figure 1). The planned comparison of the observers' ratings of men was significant in the reverse direction, t (df = 30) = 2.07, $p < .05$. The means for observers' ratings were: $\bar{X}$ (male, traditional) = 2.15, SD = .72; $\bar{X}$ (male, non-traditional) = 2.58, SD = .36.

Part Two of Hypothesis One, which suggested that non-traditional females would be more dominant than traditional females, was assessed by a t-test to determine whether the mean of Cells 7 and 9 was greater than the mean of Cells 5 and 6 (see Figure 1). The planned comparison for differences in the observers' ratings of women was significant in the predicted direction, t (df = 30) = 2.07, $p < .05$, supporting Part Two of Hypothesis One. The means for the observers' ratings were: $\bar{X}$ (female, traditional) = 2.14, SD = .69; $\bar{X}$ (female, non-traditional) = 2.64, SD = .65. The two significant t-tests and the significant

TABLE 1

ANOVA--RATINGS OF DOMINANCE BY OBSERVERS

SUMMARY TABLE

Source	SS	df	MS	F
Gender (G)	.02	1	.02	.04
Sex Role Attitudes (A)	3.42	1	3.42	8.20*
Task (T)	.81	1	.81	1.94
G x A	.02	1	.02	.05
G x T	.20	1	.20	.49
A x T	.18	1	.18	.43
G x A x T	.03	1	.03	.07
Within Groups (Error)	23.37	56	.42	
Total	28.05	63		

*$p < .01$

F-test imply a non-interactive relationship between gender and sex role attitudes while suggesting a significant effect of sex role attitudes upon dominance behavior regardless of gender, as graphically depicted in Figure 3.

H_2 states that males will be more dominant than females, or utilizing the research model nomenclature specified by Figure 1, a main effect for gender was expected, and the mean of Cells 1, 2, 3, and 4 was expected to be greater than the mean of Cells 5, 6, 7, and 8. H_2 was supported by a significant F-ratio for gender differences in self-ratings (see Table 3), F (df = 1, 56) = 4.75, $p<.05$, and the difference between means was in the predicted direction ($\bar{X}$ [male] = 2.34, SD = .39; $\bar{X}$ [female] = 2.13, SD = .36). The results, however, were questionable in light of non-significant F-ratios for gender differences generated from other interactants' (see Table 2) and observers' ratings (see Table 1).

While the data used to test both H_1 and H_2 produced conflicting interpretations of the relationship between sex-typed attitudes and gender, the data used to test H_3 proved highly consistent across all three analysis. The hypothesis, which states in null form that dominant communicative behavior will not be influenced by task differences, was assessed by a main effect test for differences between those performing Task 1 and Task 2. This was accomplished by a comparison of the mean of Cells 1, 3, 5, and 7 with the mean of Cells 2, 4, 6, and 8 (see Figure 1). Additionally, an examination was made of the interaction effects involving task differences among any of the three analyses of variance, thus indicating that task type had no detectable influence on dominance behavior.

Summary

The results of this study offer less than unequivocal answers to the overall research question, "Is there a relationship between the changing attitudes

FIGURE 2

PREDICTED DOMINANCE BEHAVIOR AS A FUNCTION OF GENDER AND SEX ROLE ATTITUDES

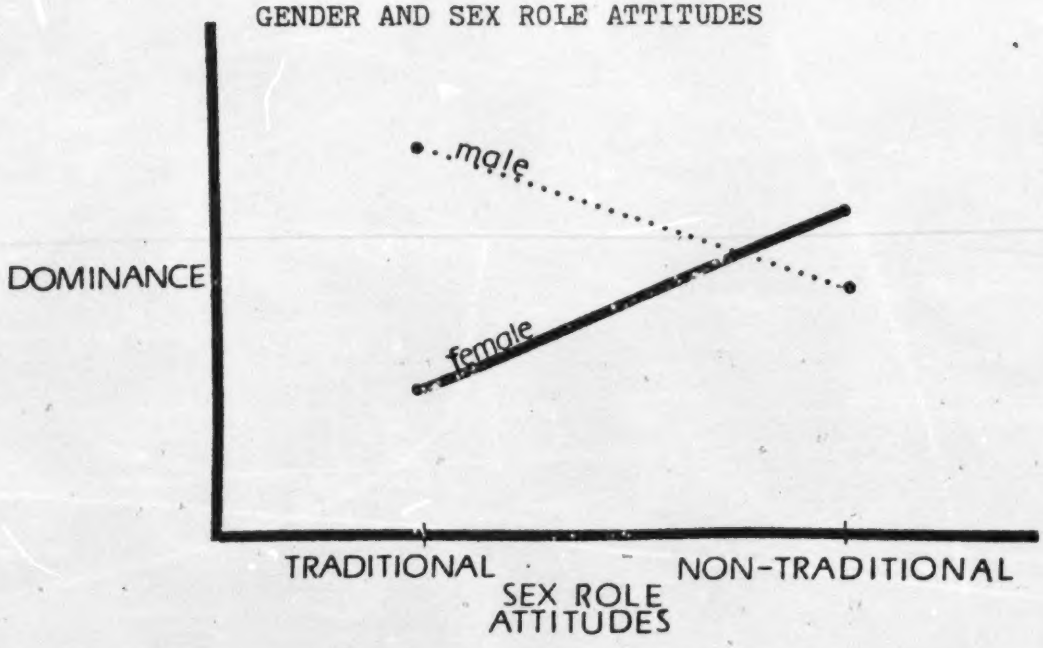

FIGURE 3

DOMINANCE BEHAVIOR AS A FUNCTION OF GENDER AND SEX ROLE ATTITUDES--RATINGS BY OBSERVERS

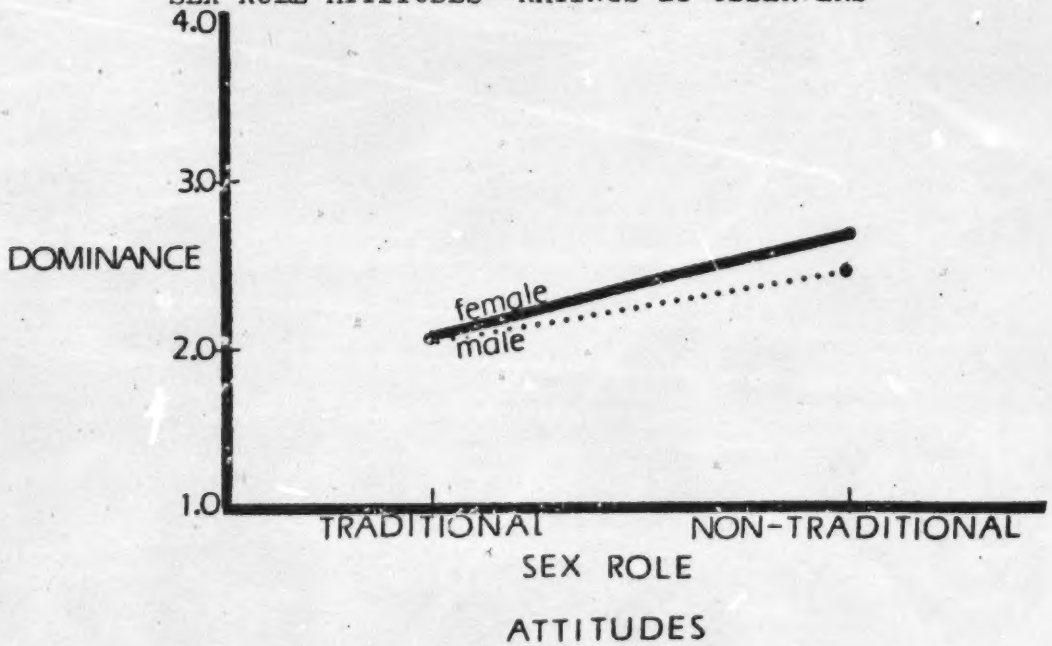

TABLE 2

ANOVA--RATINGS OF DOMINANCE BY OTHER INTERACTANTS

SUMMARY TABLE

Source	SS	df	MS	F
Gender (G)	.05	1	.05	.35
Sex Role Attitudes (A)	.39	1	.39	2.67
Task (T)	.0006	1	.0006	.004
G x A	.14	1	.14	.96
G x T	.18	1	.18	1.24
A x T	.14	1	.14	.96
G x A x T	.05	1	.05	.35
Within Groups (Error)	8.19	56	.15	
Total	9.14	63		

TABLE 3

ANOVA--SELF-RATINGS OF DOMINANCE

SUMMARY TABLE

Source	SS	df	MS	F
Gender (G)	.72	1	.72	4.75*
Sex Role Attitudes (A)	.003	1	.003	.02
Task (T)	.01	1	.01	.07
G x A	.02	1	.02	.15
G x T	.01	1	.01	.07
A x T	.01	1	.01	.07
G x A x T	.49	1	.49	3.22
Within Groups (Error)	8.51	56	.15	
Total	9.77	63		

*$p < .05$

toward sex role stereotypes and the dominance and submission aspects of male and female communication behavior?", and the related question of whether there is a difference between male and female dominance behavior. H_1 was given partial support in that non-traditional females were more dominant than traditional females as rated by observers, and H_2 was given partial support in that males were more dominant than females as indicated by self-ratings. The ratings by other interactants and self-ratings lent no support to either the overall H_1 or its two subcomponents. Likewise, H_2 received no support from data collected from observers and other interactants.

The majority of the planned comparisons suggest rejection of the first two hypotheses and a negative answer to the research question. H_3, however, was clearly retained as a null hypothesis by all of the planned comparisons, indicating that the exploratory variable, task type, had little influence on the dominance behavior of males and females.

Discussion

Measurement Characteristics

Since the assessment of the three hypotheses resulted in different outcomes for each of the sources of data regarding the interactants' dominance behavior--the interactants themselves, their partners in dyadic interaction, and naive observers--the conclusions reached in this study will be considered in the light of measurement characteristics of each data set.

The self-ratings and the ratings by other interactants were both shown to have high reliability in previous studies (Norton, 1978). High inter-rater reliability in this study was confirmed for the ratings by observers by significant correlations between each of the two pairs of raters, r (df = 32) = .69 and r (df) = 28) = .75, $p < .001$ for each pair. Both the self-ratings and the

ratings by others were clustered more closely about the mean than the observers' ratings. The variance for the observers' ratings, $s^2 = .45$, was approximately three times larger than the variance of either the self-ratings, $s^2 = .15$, or the ratings by other interactants, $s^2 = .14$. This implies a more conservative rating trend on the part of the subjects in rating their own behavior and the behavior of their partners than the trend displayed by the observers.

The self-ratings did not correlate significantly with either the observers' ratings, r ($df = 62$) = .04, or the ratings by other interactants, r ($df = 62$) = .04. The differences between self-ratings and ratings by the subjects' partners are consistent with the findings of Miller (1977) and Norton and Miller (1975) that high and low dominance subjects do not perceive dyadic interactants the same way as the other interactants see themselves. A similar phenomenon (that is, inaccurate self-perception by high or low dominance communicators) could account for the low correlation between self-ratings and observers' ratings. The ratings by other interactants, however, did correlate significantly with the ratings by observers, r ($df = 62$) = .37, $p < .05$, suggesting that if the subjects did not perceive themselves as they were perceived by others, they were at least able to see their partners the same way as their partners were perceived by naive observers.

Summarizing these observations, the self-ratings of communicatively dominant behavior appear to display perceptual inaccuracies similar to those observed in previous research. The ratings by other interactants may be a more accurate indicator in that they correlate with one other measure (ratings by observers), and the ratings by observers appear to be the best indicator in that the (1) correlate with another measure (ratings by other interactants), (2) demonstrate high inter-rater consistency, and (3) produced a wider range of responses than did the other ratings in the assessment of subjects' dominance behavior.

In light of the measurement characteristics observed, the following conclusions are warranted:

(1) The results suggest an ordinal, non-interactive relationship between gender and sex role attitudes instead of the disordinal interaction predicted by the first hypothesis. In other words, the results of this study indicate that non-traditional subjects are more dominant than traditional subjects regardless of gender instead of the anticipated reversal of traditional/non-traditional behavior differences between males and females.

(2) Hypothesis Two was rejected by two of the three data sources, and the only support for H_2 was derived from the dominance ratings generated by the subjects' self-perceptions. Without further confirmation, the hypothesis that males will be more dominant than females was rejected.

(3) The test of Hypothesis Three provides for the clearest conclusion thus far--that task differences, as operationalized in this study, play a minor role, if any, in the exhibition of dominance by males and females with traditional and non-traditional sex role orientations.

Conclusions

This study began with the view that roles are in some measure determinants of communication behavior and that these roles are dependent upon social and biological factors. The social factor explored in this study was the attitude toward sex role stereotypes, the biological factor was gender, and tasks were added as essentially an exploratory variable. The dominance/submission aspect of communication behavior was selected as the dependent variable which was both closely related to sex role stereotypes and an integral part of contemporary research in interpersonal communication.

The hypothesis (H_1) predicting that the social factor would interact with the biological factor in influencing communication behavior was not retained,

although evidence was found for a relationship between sex role attitudes and dominance among female subjects. The hypothesis (H_2) that gender is related to dominance behavior was also rejected. Dominance and submission in communication behavior was not affected by differences in the tasks assigned to subjects.

A number of theoretical and methodological alternatives were explored to help explain the findings. One alternative, which ought to command the most attention, is a multi-dimensional approach to sex role stereotypes and the behavioral influence of sex roles. Bochner and Fitzpatrick (1976) note that:

> Males also view themselves, in addition to being more controlling, as more detached or withdrawn, aloof and exclusive. This view fits the stereotype of the strong, silent type who has little need to interact with others . . . Since the control items imply moving to take over and dominate a group and the detachment items imply avoiding group or social interaction, we still need to probe the situational variables that may affect the exhibition of these contradictory behavior patterns (p. 12).

Benoist and Butcher (1977) found that observers rated males as being more detached than females as well as being more dominant, providing further evidence of contradictory behavior patterns among males. Miller (1978) reports similar interactions between variables, noting that the dominance items of the CSM are not independent and load secondarily on an argumentative dimension when factor analyzed.

In short several studies conclude that dominance is a factorially complex variable, and sex role attitudes may be closely related to such contradictory factors as dominance and detachment. Further study of non-verbal as well as verbal communication behavior is needed, such as might be accomplished by having observers rate videotapes with the audio portion removed as well as transcripts. Such a separation of verbal and non-verbal communication behavior would allow for investigation of whether variable contradiction is related to verbal/non-verbal differences. Future research may also account for complexity of dependent variables by including appropriate variables such as dominance and detachment in a multivariate design. Such analyses will hopefully provide more complete and unambiguous answers to what appears to be a complex research question.

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